

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
18 September 2003 (18.09.2003)

PCT

(10) International Publication Number  
**WO 03/077337 A1**(51) International Patent Classification<sup>7</sup>: **H01M 4/92,**  
B01J 23/60

(21) International Application Number: PCT/US03/06613

(22) International Filing Date: 6 March 2003 (06.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/362,198 6 March 2002 (06.03.2002) US(71) Applicants (for all designated States except US): **SYMXY TECHNOLOGIES, INC.** [US/US]; 3100 Central Expressway, Santa Clara, CA 95051 (US). **HONDA GIKEN KOGYO KABUSHIKI KAISHA** [JP/JP]; c/o Kabushiki Kaisha Honda, Gijyutsu Kenkyusho, 4-1, Chuo-1-chome, Wako-shi, Saitama 351-0193 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **STRASSER, Peter** [DE/US]; 551 Mariposa Avenue, Mountain View, CA 94041 (US). **GORER, Alexander** [IL/US]; 455 Mill River Lane, San Jose, CA 95134 (US). **DEVENNEY, Martin** [IE/US]; 1311 Bonita Avenue, Mountain View, CA 94040 (US). **HE, Ting** [CN/US]; 5794 Norm Street, Dublin, OH 43016 (US). **FAN, Qun** [US/US]; 1178 Quintana Way, Fremont, CA 94539 (US). **CHONDROUDIS, Konstantinos** [GR/US]; 542 Firloch Avenue, Apt. #3, Sunnyvale, CA 94086 (US). **GIAQUINTA, Daniel, M.** [US/US]; 149 Jasmine Court, Mountain View, CA 94043 (US). **OYANAGI, Hiroyuki** [JP/JP]; c/o Kabushiki Kaisha Honda, Gijyutsu Kenkyusho, 4-1, Chuo-1-chome, Wako-shi, Saitama 351-0193 (JP). **URATA, Kenta** [JP/JP]; c/o Kabushiki Kaisha Honda, Gijyutsu Kenkyusho, 4-1, Chuo-1-chome,Wako-shi, Saitama 351-0193 (JP). **IWASAKI, Kazuhiko** [JP/JP]; c/o Kabushiki Kaisha Honda, Gijyutsu Kenkyusho, 4-1, Chuo-1-chome, Wako-shi, Saitama 351-0193 (JP). **FUKUDA, Hiroichi** [JP/JP]; c/o Kabushiki Kaisha Honda, Gijyutsu Kenkyusho, 4-1, Chuo-1-chome, Wako-shi, Saitama 351-0193 (JP).(74) Agents: **RITCHEY, Steven, M.** et al.; Senniger, Powers, Leavitt & Roedel, 1 Metropolitan Square, 16th Floor, St. Louis, MO 63102 (US).(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FUEL CELL ELECTROCATALYST CONTAINING PT, ZN AND ONE OR BOTH OF FE AND NI

(57) Abstract: A fuel cell catalyst containing platinum, zinc, and at least one of nickel and iron.

5061-483



WO 03/077337 A1